

Translation

PATENT COOPERATION TREATY

PCT/JP2003/013449



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PCT-152	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/JP2003/013449	International filing date (day/month/year) 21 October 2003 (21.10.2003)	Priority date (day/month/year) 21 October 2002 (21.10.2002)
International Patent Classification (IPC) or national classification and IPC H01M 4/86, 4/88, 8/02, 8/10		
Applicant TAKASHIMA, Masayuki		

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 4 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
 - ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:
 - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
- This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

Date of submission of the demand 15 March 2004 (15.03.2004)	Date of completion of this report 01 September 2004 (01.09.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2003/013449

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ The international application as originally filed/furnished
- ☐ the description:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the claims:
- pages _____, as originally filed/furnished
- pages* _____, as amended (together with any statement) under Article 19
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the drawings:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	4-10	YES
	Claims	1-3	NO
Inventive step (IS)	Claims	4-10	YES
	Claims	1-3	NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Document 1: JP 12-513480 A (HOECHST AG.), October 10, 2000, full text
& WO 97/20358 A1
& US 5998057 A

Document 2: JP 10-251886 A (STORK SCREENS B.V.), September 22, 1998, Claims; Par. Nos. [0005], [0017], [0019]; Fig. 1
& EP 558142 A1
& US 5584983 A

Document 3: JP 6-81187 A (STORK SCREENS B.V.), March 22, 1994, Claims; Par. Nos. [0005], [0017], [0019]; Fig. 1
& EP 558142 A1
& US 5584983 A

Claims 1-3

The inventions described in claims 1-3 do not appear to be novel or to involve an inventive step based on document 1 cited in the ISR.

Document 1 discloses immersing in a slurry that includes a conductive material carrier materials of an organic polymer such as polypropylene having a pore ratio of 20-99.9 %, and creating a solid-polymer type electrode for fuel cell.

Claims 1-2

The inventions described in claims 1-2 do not appear to be novel or to involve an inventive step based on document 2 cited in the ISR.

Document 2 discloses using as an electrode for fuel cell material comprising a foamed material such as polyethylene and polypropylene having a porous structure, with a metal plated on the surface thereof.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of Box V.2. :

Claim 3

The invention described in claim 3 does not appear to involve an inventive step based on document 2 cited in the ISR.

No difficulty is found in using the electrode for fuel cell described in document 2 to solid-polymer type fuel cell.

Claims 1-2

The inventions described in claims 1-2 do not appear to be novel or to involve an inventive step based on document 3 cited in the ISR.

Document 3 discloses using as an electrode for fuel cell material comprising a foamed material such as polyethylene and polypropylene having a porous structure, with a metal plated on the surface thereof.

Claim 3

The invention described in claim 3 does not appear to involve an inventive step based on document 3 cited in the ISR.

No difficulty is found in using the electrode for fuel cell described in document 3 to solid-polymer type fuel cell.

Claims 4-10

The inventions described in claims 4-10 appear to be novel and to involve an inventive step over documents cited in the ISR.

None of the documents suggests a production method for an electrode for fuel cell, wherein a metallic film is formed on the surface of powdery particles comprising a thermoplastic resin, and a large number of particles forming the metallic film are pressed and joining into a plate shape.